TABLE 1
Draft Salton Sea Baseline Monitoring Objectives (Pre-Construction Phase)

Objective	Goal/Purpose	Monitoring Required to Meet Objective	Notes
Summarize Existing Data Gaps and Identify Receptor Locations	The goal of this objective is to i.) identify the reasons for incomplete data at existing locations, and determine if these shortcomings can be remedied, ii.) identify the additional data needed for future project level impact evaluations and iii) verify that the existing monitoring stations are in appropriate locations.		
ARB/SCAQMD/ICAPCD Ambient Baseline Data Monitoring Objectives (Semi-Permanent Sites)			
Further Establish Background Criteria Pollutant Concentrations in the Vicinity of the Salton Sea.	Goal is to enhance the capacity and utilization of the existing monitoring stations in order to refine the baseline PM10, PM2.5, NOx, SOx, and CO concentrations. Additional pollutant monitors would be added to the existing monitoring sites as needed. New AAQS stations could also be added if identified as a data gap. Background concentrations could also be used for evaluation of the potential impacts for the project level EIRs (and possibly pilot and demonstration studies).	May be possible to monitor these pollutants using existing ARB/SCAQMD/ICAPCD monitoring methods, staff, and data archiving procedures.	
Establish Range of Baseline PM_{10} and $PM_{2.5}$ Concentrations Along the Shoreline	Goal is to install a new monitoring network to measure upwind and downwind shoreline PM10 and PM2.5 concentrations. Monitoring data could be used for comparison to the 24 hour and annual standards, but the primary purpose would be to establish PM10 and PM2.5 concentrations at 60 minute intervals to better characterize the study area. Monitoring network could also be used to monitor PM10 and PM2.5 emissions during the construction and operation phases.	60-minute TEOM or BAM Data (PM10/PM2.5) or other EPA Reference/Equivalent Method	
Establish Range of Baseline H_2S (Odor) Concentrations Along the Shoreline (Also consider ammonia and SO2?)	Goal is to establish the baseline H2S (Odor) concentrations along the shoreline. Data could be used to show an improvement or degradation in odor impacts throughout the life of the project.	??	
ARB/SCAQMD/ICAPCD Meteorological Monitoring Objectives (Semi-Permanent Sites)			
Collect Meteorological Data to Evaluate Potential Impacts to Microclimatic Conditions Adjacent to the Salton Sea	Goal is to develop a new shoreline monitoring network which can be used to monitor the potential changes in the microclimatic conditions adjacent to the Salton Sea. Data would be used to supplement the existing CIMIS data. Meteorological data would be collected on an hourly basis.	1-Hour: 10, 2, 1 meter wind speed and wind speed gust data 1-Hour: 10 and 2 meter wind direction and sigma theta data 1-Hour: Humidity, Barometric Pressure, and Rainfall data 1-Hour: 10 and 2 meter temperature data 1-Hour: Solar Radiation	
Develop a 3-Year Meteorological Data Set to support CALPUFF and AERMOD/HARP Modeling, if needed	Goal is to develop a new shoreline meteorological monitoring network to collect 3-years of hourly data which meet the EPA modeling guidelines (e.g., data are 90% complete, instrumentation meets minimum accuracy and precision requirements, etc.)	1-Hour Data (90% Data Recovery): 10 Meter Wind Speed, Wind Direction, Sigma Theta 10 Meter and 2 Meter Temperature Barometric Pressure Precipitation and Relative Humidity Solar Radiation	
5-Year Plan Project Level Research Monitoring Objectives (Focused Studies)			
Research PM_{10} and $PM_{2.5}$ Emission Rates for Existing Exposed Playa to Determine: - Seasonal Variation in the Percentage of “Stable” and “Unstable” Crust formations - Landform Variation (e.g. paleo lake, playa-like, barnacle beach, dry wash, and interdune)	Goal is to better characterize the emission rates and source apportionment for future project level environmental studies. Shoreline meteorological data would be collected simultaneously at sub-hour increments (5 minute or 20 minute) and multiple levels above ground (1, 2, and 10 meters).	Seasonal PI-SWIRL Testing (DRI) Seasonal Wind Tunnel Testing (DRI) Seasonal Ball Drop/Crust Strength Test Other DRI Research?? Seasonal Sensit/Cox Sand Catcher Data Collection 5 min or 20 min meteorological data: (1, 2, 10 wind speed and wind speed gust data)	

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- Seasonal Crust Strength - Particulate Reservoirs for Various Landforms - Temperature Variation - Effects of Sand Motion		(2, 10 meter direction and sigma theta data) (2 meter and 10 meter ambient temperature data) (RH sensor)	
Research PM_{10} and $PM_{2.5}$ Emission Rates for Playa Exposed and/or Disturbed During Construction	Goal is to better characterize the emission rates and source apportionment of soils disturbed during the construction of pilot studies. This data can be compared to undisturbed soil characteristics to help estimate what future construction impacts may be on a larger scale.	PI-SWIRL Sensit/Cox Sand Catcher Wind Tunnel Testing Other DRI Research?? 5 min or 20 min meteorological data: (1, 2, 10 wind speed and wind speed gust data) (2, 10 meter direction and sigma theta data) (2 meter and 10 meter ambient temperature data) (RH sensor)	
Refine Seasonal Threshold Velocities for Existing Exposed and/or Disturbed Playa	Goal is to better characterize the threshold velocities on a sub-hour basis for existing and/or disturbed playa. Threshold velocities will be used to refine the emission modeling of future project level environmental studies. Secondary goal is to further evaluate the potential correlation of 10, 2, and 1 meter wind data.	5-minute; 10, 2, and 1 meter wind speed and wind speed gusts Sensit/Cox Sand Catcher Other DRI Research??	
Quantify the Existing Particulate Deposition Rates within the Surrounding Communities (baseline human, ecological, and agricultural exposure)	Goal is to quantify the existing rate of particulate deposition for comparison to the rate of deposition during the construction and operation of the project.	Deposition Plates Microscopic XRD??	
Speciation of Airborne Particulate Matter Along the Shoreline and in the Surrounding Communities	Goal is to speciate the airborne particulate collected along the shoreline and within the community to determine the potential impacts to human, ecological, and agricultural exposure during the project.	Deposition Plates TEOM Filters (PM10/2.5) Size Segregated Filters (3 or 7 Stage Filters – UCD DELTA Group Research??) Other DRI Research??	
Develop a Refined Meteorological Data Set for the MacDougall Dust Emissions Estimation Method	Goal of this objective is to further refine the MacDougall Method input parameters used for future project level environmental studies.	Wind Speed Data (5 and 60 min at 1, 2, and 10 meter) PI-SWIRL Data for Variable Surface Characteristics Precipitation Data (60 minute) Humidity Data (60 minute) Threshold Wind Velocities PI-SWIRL Data Wind Data and Definition of Wind Event	
Evaluate Effectiveness of Control Strategies for Potential Dust Emissions from Existing Exposed Playa	Goal of this objective is to evaluate the effectiveness of various control strategies on a pilot scale, and if necessary, on a demonstration and/or commercial scale.	Selected Control Strategies to be Determined	
Collect Meteorological Data to Support Water Quality Models (as well as other technical disciplines)	Goal of this objective is to collect the meteorological data necessary to refine the water budget modeling conducted for future project level environmental studies. (Will also need to coordinate with other disciplines to make sure their data needs are met.	Need to Coordinate with Other Technical Disciplines	